

**ABSTRACT OF THE DISCLOSURE**

The present invention is generally directed to a method of reducing oxidation of metal structures using ion implantation, and a device constructed in accordance with the method. In one illustrative embodiment, the method comprises providing a semiconducting substrate having a first layer of insulating material formed thereabove, the first layer of insulating material having at least one conductive structure positioned therein, and performing an ion implant process to implant ions into at least the one conductive structure.